

CLAIMS:

What is claimed is:

- 1        1.        A method of indexing a media element comprising:  
2                identifying the media element to be indexed;  
3                selecting a characterization process to be applied to said media element;  
4                applying said characterization process to said media element, said  
5        characterization process to include,  
6                        generating a data string for said media element, said data  
7                        string including trait information for said media element; and  
8                indexing said media element using said data string.
- 1        2.        The method of claim 1, wherein said media element is one of a video clip,  
2        static photograph, JPEG image, animation, audio clip, and text.
- 1        3.        The method of claim 1, wherein identifying the media element comprises  
2        selecting the media element and loading the media element into a memory of a  
3        computer system.
- 1        4.        The method of claim 3, wherein loading the media element into said  
2        memory comprises downloading said media element over a network connection.

1 5. The method of claim 1, further comprising determining if the media  
2 element can be compressed and, if so, compressing a data file containing said  
3 media element before applying the characterization process to said media  
4 element.

1 6. The method of claim 1, wherein selecting said characterization process  
2 comprises selecting said characterization process to be applied to said media  
3 element from a plurality of characterization processes based on a predetermined  
4 criteria.

1 7. The method of claim 1, wherein said characterization process further  
2 includes,  
3 determining at least one common pixel value of said media element, and  
4 determining a relationship between a first pixel and a second pixel of said  
5 media element, said first and second pixels each having said at least one common  
6 pixel value.

1 8. The method of claim 7, wherein determining at least one common pixel  
2 value comprises determining at least one common pixel value for said media  
3 element, and wherein said relationship between said first pixel and second pixel  
4 is based on a distance between said first and second pixels.

1 9. The method of claim 1, wherein applying said characterization process  
2 further comprises:  
3 determining at least one common pixel value of said media element;  
4 determining a first tolerance for each of said at least one common pixel  
5 value;  
6 identifying a plurality of pixels of said media element having said at least  
7 one common pixel value;  
8 determining pixel locations for each of said plurality of pixels;  
9 determining a second tolerance for said pixel locations; and,  
10 determining relative pixel distance information for said plurality of pixels.

1 10. The method of claim 9, where generating a data string for said media  
2 element comprises generating a data string for said media element, said data  
3 string including trait information for said media element, said trait information  
4 to be based on said at least one common pixel value and said relative pixel  
5 distance information.

1 11. The method of claim 9, further comprising generating a histogram band  
2 for each of said at least one common pixel value of said media element, where  
3 said histogram bands are based on a percentage of a predetermined area of said  
4 media element that said at least common pixel value represents.

1 12. The method of claim 9, further comprising adjusting at least one of said  
2 first and second tolerances to achieve a desired result.

1 13. The method of claim 1, further comprising assigning a label to said media  
2 element, and accessing said media element using said label.

1 14. The method of claim 13, wherein said label is used as a reference pointer  
2 to said data string.

1 15. The method of claim 1, wherein indexing said media element comprises  
2 comparing said data string for said media element to an additional data string,  
3 said additional data string corresponding to an additional media element, and  
4 associating the media element with the additional media element where said  
5 data string and additional data string have a common trait.

1 16. The method of claim 1, further comprising displaying a result of said  
2 indexing to a user.

1 17. The method of claim 1, wherein said characterization process is applied  
2 only to a predetermined area of said media element.

1 18. The method of claim 1, wherein said characterization process further  
2 includes determining at least one shape-based trait of said media element, said at  
3 least one shape-based trait to be included in said trait information of said data  
4 string.

1 19. The method of claim 1, further comprising retrieving said media element  
2 by reviewing a list of labels, each of said labels corresponding to a data string  
3 representing an indexed media element; and selecting said media element from  
4 said list for display.

1 20. A system for indexing a media element comprising:  
2 a processor;  
3 a display coupled to the processor;  
4 a memory coupled to the processor, the memory containing instruction  
5 sequences to cause said processor to:  
6 identify the media element to be indexed;  
7 select a characterization process to be applied to said media  
8 element;  
9 apply said characterization process to said media element, said  
10 characterization process to,  
11 generate a data string for said media element, said data  
12 string including trait information for said media element; and  
13 index said media element using said data string.

1 21. The system of claim 20, wherein said media element is one of a video clip,  
2 static photograph, JPEG image, animation, audio clip, and text.

1 22. The system of claim 20, wherein said instruction sequences to cause said  
2 processor to identify the media element include instruction sequences to select  
3 the media element and to load the media element into the memory.

1 23. The system of claim 22, wherein said media element is loaded into the  
2 memory by downloading said media element over a network connection.

1 24. The system of claim 20, wherein said memory further includes instruction  
2 sequences to cause said processor to determine if the media element can be  
3 compressed and, if so, to compress a data file containing said media element  
4 before applying the characterization process to said media element.

1 25. The system of claim 20, wherein said instruction sequences to cause said  
2 processor to select said characterization process further cause said processor to  
3 select said characterization process to be applied to said media element from a  
4 plurality of characterization processes based on a predetermined criteria.

1        26.    The system of claim 20, wherein said characterization process is further to,  
2                determine at least one common pixel value of said media element, and  
3                determine a relationship between a first pixel and a second pixel of said  
4        media element, said first and second pixels each having said at least one common  
5        pixel value.

1        27.    The system of claim 26, wherein said at least one common pixel value is at  
2        least one common pixel color for said media element, and said relationship  
3        between said first pixel and second pixel is based on a distance between said first  
4        and second pixels.

1        28.    The system of claim 20, wherein said characterization process is further to:  
2                determine at least one common pixel value of said media element;  
3                determine a first tolerance for each of said at least one common pixel  
4        value;  
5                identify a plurality of pixels of said media element having said at least one  
6        common pixel value;  
7                determine pixel locations for each of said plurality of pixels;  
8                determine a second tolerance for said pixel locations; and,  
9                determine relative pixel distance information for said plurality of pixels.





